

**NUCLEIC ACID SEQUENCES AND METHODS OF USE FOR THE  
PRODUCTION OF PLANTS WITH MODIFIED POLYUNSATURATED FATTY  
ACIDS**

5 By this invention, novel nucleic acid sequences are provided, wherein said nucleic acid sequence is a genomic sequence of a plant desaturase encoding sequence. Also provided in the present invention are the promoter and intron sequences of the desaturase genomic sequences. Furthermore, recombinant DNA constructs employing the polynucleotide sequences are provided. The instant invention also provides methods for  
10 the modification of fatty acid compositions in host plant cells.